Nye County Water District
2101 E. Calvada Blvd. Ste., 100 · Pahrump, Nevada 89048
(775) 727-7727 · Fax (775) 727-7919

March 7, 2013

Mr. Mike Monasmith
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5112

Re: Comments by the Nye County Water District on the Hidden Hills Solar Energy Generating System (HHSEGS)

Dear Mr. Monasmith,

The Nye County Water District has been following the HHSEGS proceedings as an interested Government Agency for the last year. Since water issues are such an integral part of any renewable energy project we have a great interest in those parts of the proceeding. As we stated in our first comment letter:

> *"Bright Source Energy should be commended in the design of the Project. The information provided indicates an annual water usage of 140 acre feet of water to produce 500 MW of power. This is much more efficient in water usage than other Solar Thermal projects have indicated in their project designs. However, any large uses of water in the desert, especially in designated basins like Pahrump, need special attention. The Hidden Hills project is located adjacent to the State Line and although not physically in Nye County, many of the impacts from this project will be in Nye County. The electric transmission line and natural gas pipeline serving the project pass through Nye County. Filings by Inyo County and other interested parties have expressed an interest in providing input into the CEC process in regards to mitigation and the need for additional hydrologic information. The NCWD has interest in the water science and mitigation strategies as well."*

As the local governmental entity with jurisdiction over water issues in Nye County, we have concerns about either federal or out of state agencies attempting to adjudicate issues over Nye County water availability and usage, water science, mitigation measures and Nevada water rights without including us or appropriate agencies from the State of Nevada.

Bright Source Energy is proposing to use 140 afa of water to generate 500 MW of electricity. As a point of reference, Solar Reserve near Tonopah Nevada is proposing to use 600 afa to generate 110 MW. Bright Source has provided over 90% mitigation by spending millions on Dry Cooling and other water saving technologies. This proposed usage of 140 afa on a footprint of 3000+ acres is a tremendous conservation measure since almost any other alternative would use more water and would fall outside your (and most other) regulation. We have no doubt that if this project does not move forward then some other use for this private land will eventually be identified.

While we appreciate the conservation measures the project is undertaking, the Pahrump groundwater basin is severely over allocated, and any potential additional groundwater uses in the basin should be mitigated. As the local agency having jurisdiction over water issues in Nye County, we recommend requiring that three acre-feet of water rights be retired for every one acre-foot of new pumping in the Pahrump basin. We also feel it is necessary to include the NCWD in any discussion of mitigation in Nye County.

There have been proposals that a 6-inch drop in water level over the 30 year project life would trigger mitigation measures up to a shutdown of pumping. We feel this is a draconian measure and any action based on a 6-inch drop cannot be justified from existing water data and models. Nye County has provided a significant amount of historical data for this area but we recognize the need for more data to get an accurate representation of the complex geology of this area. An attachment to this letter is a report from Glorieta Geoscience, Inc., one of our Hydrology consultants. This report shows data from the BLM maintained Stump Springs Well reflecting about a 2-foot annual seasonal variation and an 8-foot variance over the last 10 years, mostly from a wet year in 2005. This is the closest well to the project we know of that has 10 years of continuous data.

In addition, Glorieta Geoscience, Inc. has developed a superposition model for the Pahrump Valley which represents the State Line Fault System as a low–transmissivity zone. This model has shown a 2-inch drop at the Stump Spring well over the 30 year project life. Although Glorieta' s model calibration is good, NCWD knows additional data is required to characterize ground water flow across the State Line Fault system. Based on mapped faults and the 300 feet higher water level in Stump Springs compared to the HHSEGS wells, compartmentalization of the aquifer system across the State Line Fault System is inferred, indicating geologic separation between Stump Springs and the HHSEGS site. Additional data is needed to accurately model the fault system, but we do know that any conclusions attributing significant impacts at Stump Springs and any other off site location are merely speculative and do not reflect the geologic and hydrologic conditions in the area.

We respectfully offer that under California Environmental Quality Act (CEQA) guidance, once an agency finds that a particular effect is too speculative for evaluation, discussion of that effect should be terminated.

Much of the discussion about water mitigation on the Nevada side of the border is based on a concern for mesquite trees. The following excerpt from a letter by the Nevada State BLM director shows the concerns:

*In 2006, the BLM developed a Conservation Management Strategy for Mesquite and Acacia Woodlands in Clark County, Nevada. This strategy identified the mesquite bosques located in the Pahrump Basin as a high priority area for conservation actions and identified the threats to future health and recruitment of the stands. One of the identified threats was water management and the associated conservation objective was to maintain groundwater at current or higher levels, above 35 feet below ground surface.*

We think there has been a misinterpretation of this strategy (study) by many individuals both within and outside the federal government. While Mesquite trees are not individually threatened or endangered, what the study does say is that collectively large dense mesquite woodlands (bosques) create a unique ecosystem. As follow up to this 2006 study, several Areas of Critical Environmental Concern (ACECs) were designated by BLM, including the Stump Springs and Ash Meadows Mesquite ACECs in the Pahrump area. Please note that this study did not propose to protect all individual trees or fragmented stands of trees and the BLM has not provided Nye County with a basis to protect these trees outside of the ACECs.

The Mesquite bosques in the Pahrump area that have been designated as ACECs are primarily in areas of shallow groundwater like Stump Springs. The BLM letter above states a desire to maintain a water level of 35 feet or less below the surface. Stump Springs currently has water at or very near the surface and the Stump Springs well is between 26 and 27 feet below the surface. Clearly, the mesquites in the Stump Springs ACEC are in no danger of the HHSEGS project causing the water to drop below 35 feet and there has been no data provided that "35 feet below the surface" is a depth of any special significance that would trigger an adverse impact on the health of the mesquite. For example, we have data collected from other healthy Mesquite bosques with associated water levels 40 feet or more below the surface.

Mesquite trees themselves are quite plentiful in fragmented stands and watersheds throughout the Pahrump Valley. Aerial photographs over the last 60 years show an increase in mesquite coverage, but these are typically small trees, not in dense stands and are predominantly found in washes, sand dunes and escarpments. The depth to water is over 100 feet in many of these areas so it is likely that these mesquites are dependent on precipitation and runoff. The mesquite trees closest to the HHSEGS site fall into this category: Water withdrawal associated with the project will not/could not have any effect on these trees and therefore, any mitigation proposed to protect these trees by restricting pumping is misdirected.

The Nye County Water District would like to be a partner with the Energy Commission and other agencies. We ask that any mitigation strategy be based on sound science and that funds expended for water mitigation go towards a better understanding of the local hydrology and towards protecting what is a fragile resource in the desert environment. In addition, we strongly request that we be included in any science or mitigation requirements that occur in Nye County.

We have included attachments from Levi Kryder, Nye County Geoscience Manager, and a letter from Glorieta Geoscience, Inc. that provide additional information and technical backup to our comments. If you have any questions please contact Darrell Lacy, General Manager of the NCWD.

Sincerely,

Tim McCall
Chairman
Nye County Water District
Governing Board